

Remarks

Reconsideration of this Application is respectfully requested.

Claims 1-28 are pending in the application, with 1, 6, 12, 19, 23, and 26 being the independent claims. Based on the following remarks, Applicants respectfully request that the Examiner reconsider and withdraw all outstanding rejections.

Rejections under 35 U.S.C. § 102

In paragraph 2 of the Office Action, the Examiner rejected claims 1, 2, 15-22, and 26 under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 5,483,695 to Pardoen (hereafter Pardoen). The Examiner also appears to have rejected claims 3, 4, and 5 under this section. Applicants respectfully traverse.

The Examiner's reasons appears to be identical to the reasons provided in the prior Office Action mailed on April 11, 2003. For at least the reasons provided in Applicants' reply, filed on June 11, 2003, Applicants respectfully submit that Pardoen does not teach or suggest the invention as recited in the claims.

In addition, Applicants note that the term "aliasing," as used in the subject application, refers to down-conversion performed at an aliasing rate or frequency that is below the frequencies of the signal being down-converted. See, for example, U.S. Patent No. 6,061,551, at, for example, column 19, lines 45-67. The '551 patent issued from U.S. Application Ser. No. 09/176,022, which was incorporated by reference in its entirety by the subject application.

Accordingly, the term "aliasing," as recited in the rejected claims, refers to down-conversion performed at a rate or frequency that is below the Nyquist frequency for the signal being down-converted. This is opposed to conventional sampling theory, and Pardoen, which teaches to sample at a Nyquist rate that is more than twice the rate or frequency of the signal being sampled.

For at least this additional reason, Pardoen does not teach or suggest all of the features recited in the rejected claims. For at least these reasons, reconsideration and withdrawal of the rejections of claims 1-5, 15-22, and 26 is requested.

Furthermore, as noted in the specification:

"Amplitude modulated (AM) signals and phase modulated (PM) signals can be directly down-converted to demodulated baseband signals by aliasing the FM and PM signals at sub-harmonics of the AM and PM signals."

"Frequency modulated (FM) signals, however, pose special challenges. For example, the '022 application discloses how frequency shift keying (FSK) signals, when aliased at fixed sub-harmonic, are down-converted to amplitude shift keying (ASK) signals or to phase shift keying (PSK) signals. FM signals, unlike AM and PM signals, are not necessarily directly down-converted to demodulated baseband information signals by aliasing at a fixed sub-harmonic."

(See the present specification at page 7, lines 1-10).

Accordingly, claim 1 recites, among other features, "adjusting said aliasing rate to compensate for frequency changes of the FM signal." Claims 19 and 26 recite similar features. In paragraph 4 of the Final Office Action, the Examiner cites Pardoen at col. 5, lines 1-19 for this feature. However, nowhere in the recited passage of Pardoen, nor any other part of Pardoen, is there any teaching or suggestion to *adjust* the "aliasing rate to compensate for frequency changes of the FM signal."

For at least this additional reason, reconsideration and withdrawal of the rejection of claim 1-5, 19-22, and 26 is requested.

Rejections under 35 U.S.C. § 103

In paragraph 4 of the Office Action, the Examiner rejected claims 1, 10-12, 14-17, 24-25, and 27-28 under 35 U.S.C. § 103 as being unpatentable over Pardoen. The Examiner also appears to have rejected claims 2, 6, and 9, under this section. Applicants respectfully traverse.

As noted above, Pardoen does not teach or suggest aliasing as recited as recited in claims 1, 2, 6, 9, 10-12, 14-17, 24-25, and 27-28. Reconsideration and withdrawal of this rejection is respectfully requested.

In paragraph 5 of the Office Action, the Examiner rejected claims 7 and 8 under 35 U.S.C. § 103 as being unpatentable over Pardoen in view of U.S. Patent No. 5,600,680 to Mishima *et al.* (hereafter Mishima). Applicants respectfully traverse.

Mishima does not overcome the deficiencies of Pardoen, which are described above. Claims 7 and 8 depend from claim 1 and are thus patentable for at least the reasons provided above with respect to claim 1. Reconsideration and withdrawal of the rejection of claims 7 and 8 is requested.

Conclusion

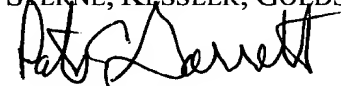
All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider and withdraw all presently outstanding rejections.

Applicants believe that a full and complete reply has been made to the outstanding Final Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Reply is respectfully requested.

Respectfully submitted,

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